



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/913,938 | 10/02/2001 | Robert Pacholik | 003300-817 | 5907 |

21839 7590 08/08/2003

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

[REDACTED] EXAMINER

ANDREWS, MELVYN J

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1742

DATE MAILED: 08/08/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

fw

| | | |
|------------------------------|-------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/913,938 | PACHOLIK ET AL. |
| | Examiner Melvyn J. Andrews | Art Unit 1742 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 October 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-43 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>10</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 to 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 1 is indefinite all of the steps of the process intended to be claimed are not clearly set forth because not all steps are actively recited but method claims should at least recite positive active steps to make clear what subject matter the claims encompass. *Ex parte Erlich* , 3 USPQ2d 1011 . The examiner has identified the following "steps" : "etching process" on line 2 including the steps of "are etched" on line 2, "then rinsed" and "being removed" on line 3, "is extracted" on line 5, "being recirculated" , "renewed etching" and being contacted, on a retraction step" on lines 6 and 7, "passes" on line 7, "being recirculated" on line 8 , "the re-extraction step to renewed extraction" on lines 8 and 9, the steps of" passing" on line 9, "the re-extraction step" on line 10 , "copper recovery" on lines 10 and 11, , "diverting a flow" on line 11 , "the operation for recovering copper" on lines 11 and 12 "recirculating said flow" on line 14 and "operation for electroplating printed boards" on line 15 but it is unclear that all

theses expressions are intended to be steps if so then these steps should be clearly set forth.

In Claim 1 line 12 the expression "the same" is indefinite.

In Claim 5 the meaning of "closed process" is unclear.

In Claims 6, 7, 28 and 29 the meaning of "ratio" is not set forth

Claims 8 to 22 and 30 to 38 are indefinite because there is no antecedent basis forth "plating" so that the step of "pulse plating" cannot further limit what is not clearly claimed since a step of "plating" is not claimed in Claim 1.

Claim 23 recites the limitation "alkaline substance" and "organic material in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim. Also "the same" on line 4 of Claim 21 is indefinite

In Claims 22, 23 41 and 42 what does the expression "(-s)" mean ?

Claim 24 and 43 recite the limitation "colloidal copper" in line 24. There is insufficient antecedent basis for this limitation in the claim.

In Claim 25 "extractors of the type" is indefinite. MPEP 2173.05 (c) E.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter: Reinhardt et al (US 4,252,621) disclose a process of re-generating an ammonical etching solution for etching printed circuit boards (col.1, lines 23 to 27), Oxley et al (US 5,705,048) disclose a process for re-generating an etchant (col.6, line 9 to col.8, line 13) and Martin et al (US 6,071,398) disclose a programmed pulse electroplating process to form a circuit board (col.4, lines 2 to 5) but the prior art do not

disclose or suggest a method including a steps of diverting a flow of a copper containing acid solution, adjusting a copper content of the solution and re-circulating the adjusted flow to an operation for electroplating printed boards and forming printed boards by electroplating .

Claims 1 to 43 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is 703-308-3739. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



MELVYN ANDREWS
PRIMARY EXAMINER

mja
August 4, 2003